

In the Specification

Please amend the specification as follows:

[0001] (Amended) This is a continuation of [[pending]] application 10/243,073 filed 13 September 2002, now U.S. Patent 6,659,639, which is a continuation application of application Serial No. 09/843,927 filed 30 April 2001, now U.S. Patent 6,540,398, which is a division of U.S. Serial No. 09/145,549 filed 02 September 1998, now U.S. Patent 6,267,500, which is a division of U.S. Serial No. 08/848,012 filed 28 April 1997 and now U.S. Patent 5,823,679 issued 20 October 1998. U.S. Serial No. 08/848,012 is a continuation-in-part application of both [[pending]] United States Patent applications Serial Nos. 08/764,659 filed on 11th December 1996, now U.S. Patent 5,823,678, and 08/617,265 filed on 18th March 1996, now U.S. Patent 5,727,880, in the names of Milton B. Hollander and W. Earl McKinley for Method and Apparatus for Measuring Temperature Using Infrared Techniques, the latter of which, is a continuation-in-part of United States application Serial No. 08/348,978 filed on 28th November 1994, now U.S. Patent 5,524,984 which in turn was a continuation application of then copending United States Patent application Serial No. 08/121,916 filed 17th September 1993, now issued as United States Patent 5,368,392 on 29th November 1994.

[0084] (Amended) The laser 1012 of the sighting device 1000 in Figure 11 is adapted to rotate about the pivot 1020 when driven by the motor 1021. Thus, the laser 1012 is able to project a laser

beam 1014 with a circle-type pattern positioned against a target (not shown). During rotation, centrifugal force will act upon the counterweights 1015A and 1015B causing the laser 1012 to tilt. The angle at which it tilts can be controlled by the screw adjustment 1013 and 1011. The angle is adjusted to correspond to the field of view of the infrared detector in which the sighting device is used. The laser beam 1014 will then follow the periphery of the target zone of the infrared detector (not shown). Once the motor 1021 is turned off, the return spring 1019 will cause the laser 1012 to center. In this manner, the central laser beam 1014 also (seen in fig. 18 at 1406) will now be in the center of the target zone. This serves as a calibration for the user and insures that the laser sighting device is properly aimed.

[0093] (Amended) Figures 18 and 19 illustrate yet another and preferred best mode version of the laser sighting device of the present invention, in combination with a radiometer. In this embodiment, a conventional radiometer 1400 is provided. A laser sighting device denoted generally by reference numeral 1401 has a single-beam laser generator 1402 which produces the laser beam 1403. Aligned axially with the laser beam 1403, and in front of the laser generator 1402, there is positioned a support 1404 housing an optical means such as a beam splitter, holographic component or a diffraction grating 1405. In this instance, the diffraction grating optical element means 1405 is selected when

struck or illuminated by the laser beam 1403 to produce a visible diffraction pattern on the measurement surface, from the entering single beam 1403, as both a [[0 order]] central beam 1406 and also a total of twelve sub-division beams 1403a which are concentric with and symmetrically divergent about both the axis and central beam 1406 and form a ring of intensive surface light spots, positioned by said diffraction grating or beam splitter for location and identification of the position and size of the measurement surface area. Referring to Figure 19 there is shown the concentric light intensity distribution pattern of more than two laser light spots 1403b radially displaced from the central beam 1406 and formed on the measurement surface at individual mutually spaced locations as a ring of spots 1403b, where the sub-division beams 1403a strike the target 1407 whose temperature is to be investigated. Due to the nature of the diffraction grating 1405, spots 1403b are circumferentially equidistantly spaced by distance  $B$  in a circle positioned by the element 1405 about the axis of the laser beam 1403, and the total spread of the sub-division beams 1403a is a width  $A$  which depends upon the distance of the device from the target 1407. Adjacent to and laterally of the laser generator 1402 in its support 1404 there is positioned a radiometer 1400 whose viewing axis is parallel to the axis and central beam 1406 of the [[generated]] laser but which may if desired be made adjustable with respect to the axis and central beam 1406 so that a selected area of the target, perhaps not at the center of the spots 1403b, may be investigated.

100% AVAILABLE COPY